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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,742	07/30/2003	Alfred I-Tsung Pan	200206676-1	8919

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HEWLETT PACKARD COMPANY
P O BOX 272400, 3404 E. HARMONY ROAD
INTELLECTUAL PROPERTY ADMINISTRATION
FORT COLLINS, CO 80527-2400

EXAMINER	
TENTONI, LEO B	
ART UNIT	**PAPER NUMBER**
1791	

NOTIFICATION DATE	DELIVERY MODE
01/08/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

JERRY.SHORMA@HP.COM
mkraft@hp.com
ipa.mail@hp.com

Office Action Summary	Application No.	Applicant(s)	
	10/629,742	PAN ET AL.	
	Examiner	Art Unit	
	Leo B. Tentoni	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 October 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17,21-25 and 31-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17, 21-25 and 31-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-3, 9-11, 14, 15 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ederer et al (U.S.

Patent 6,838,035 B1) in combination with Moszner et al (U.S. Patent 6,939,489 B2) for the reasons of record.

4. Claims 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ederer et al (U.S. Patent 6,838,035 B1) in combination with Moszner et al (U.S. Patent 6,939,489 B2) as applied to claims 1-3, 9-11, 14, 15 and 36 above, and further in view of Jang et al (U.S. Patent 6,405,095 B1) for the reasons of record.

5. Claims 12, 13, 16, 17 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ederer et al (U.S. Patent 6,838,035 B1) in combination with Moszner et al (U.S. Patent 6,939,489 B2) as applied to claims 1-3, 9-11, 14, 15 and 36 above, and further in view of Fink et al (U.S. Patent 5,510,066 A) for the reasons of record.

6. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ederer et al (U.S. Patent 6,838,035 B1) in combination with Moszner et al (U.S. Patent 6,939,489 B2) as applied to claims 1-3, 9-11, 14, 15 and 36 above, and further in view of Edie et al (U.S. Patent 6,579,479 B1) for the reasons of record.

7. Claims 21, 25 and 31-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ederer et al (U.S. Patent 6,838,035 B1) for the reasons of record.

8. Claims 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ederer et al (U.S. Patent 6,838,035 B1) as applied to claims 21, 25 and 31-35 above, and further in view of Jang et al (U.S. Patent 6,405,095 B1) for the reasons of record.

Response to Arguments

9. Applicant's arguments filed on 15 October 2007 have been fully considered but they are not persuasive.

10. Applicant argues (pages 10 and 11) that Moszner et al does not teach the use of two different liquefied materials (rather, Moszner et al teaches the use of a single material that may consist of two or more components). Examiner responds that Moszner et al does teach the use of two different materials (see col. 4, lines 5-7; col. 5, lines 44-52; claim 1, last two lines; these portions of Moszner et al are directed to the use of two different materials, not just a single material that may consist of two or more components).

11. Applicant argues (page 11) that there is no motivation to combine the teachings of Ederer et al and Moszner et al. Examiner responds that there is motivation to combine the

teachings of Ederer et al and Moszner et al (see, for example, col. 3, lines 41-46 of Moszner et al). Furthermore, all of the claimed steps were known in the prior art (i.e., Ederer et al teaches all of the steps except for the use of first and second different liquefied materials, and Moszner et al teaches the use of first and second different liquefied materials; Edere et al and Moszner et al are both directed to making three-dimensional products by rapid prototyping) and one of ordinary skill in the art at the time the invention was made would have combined the known steps with no change in their respective functions, and the combination of the known steps would have yielded predictable results to one of ordinary skill in the art (*KSR International Co. v. Teleflex Inc.*, 550 U.S. _____, 82 USPQ29 1385 (2007)).

12. Applicant argues (page 12) that not all of the limitations of claim 21 are taught by Ederer et al, namely "removing the object from the viscous liquid in the vat and then solidifying the viscous liquid remaining in the voids between solidified drops of the material forming the object". Examiner responds that solidifying any viscous liquid in the voids would have been obvious to one of ordinary skill in the art at the time the invention was made in the process of Ederer et al principally

because at least some small amount of viscous (support) liquid remains in the voids (i.e., it would be readily apparent to one of ordinary skill in the art that 100% of the viscous (support) liquid is not removed from the voids), and that there would be a reasonable expectation on the part of one of ordinary skill in the art that this small amount of viscous liquid solidifies (along with the rest of the material of the three-dimensional product) (*KSR International Co. v. Teleflex Inc.*, 550 U.S. _____, 82 USPQ29 1385 (2007)).

13. Applicant argues (page 12) that Ederer et al teaches away from the claimed process because Ederer et al teaches that the supporting fluid remains in its liquid state throughout the production process (citing col. 2, lines 54-58 and col. 3, lines 10-13 of Ederer et al). Examiner responds that this would be the case up until solidification of the three-dimensional product, when all of the material (i.e., the material of the three-dimensional product and any small amount of support liquid which is not removed) solidifies.

14. Applicant argues (pages 12 and 13) that the preferred glycerin solution taught by Ederer et al is not capable of being solidified. Examiner responds that Ederer et al is not limited to only a glycerin solution as a support liquid. Also, the

materials used for the three-dimensional product and the support material determine the solidification of the product. Furthermore, instant claim 21 is silent as to temperature conditions and thus, this argument is not commensurate in scope with the instant claims.

15. Applicant argues (page 13) that Ederer et al teaches preventing any voids from forming within the structure (citing col. 8, lines 1-5 of Edere et al). Examiner responds that it is the surface of a layer which is smoothed, not the overall layer and thus, Ederer et al does not teach preventing void formation.

Conclusion

16. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leo B. Tentoni whose telephone number is (571) 272-1209. The examiner can normally be reached on Monday - Friday (6:30 A.M. - 3:00 P.M.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina A. Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Leo B. Tentoni

Leo B. Tentoni
Primary Examiner
Art Unit 1791

lbt